

~~To TAMP~~  
~~then file~~  
ACT/047/017

# WHITE RIVER SHALE OIL CORPORATION

SUITE 500 PRUDENTIAL BUILDING, 115 SOUTH MAIN STREET  
SALT LAKE CITY, UTAH 84111  
(801) 363-1170

JIM

October 20, 1983

OCT 25 1983

RECEIVED  
OCT 24 1983

DIVISION OF  
OIL, GAS & MINING

Mr. Robert L. Elderkin  
Acting Branch Chief  
Branch of Oil Shale  
Bureau of Land Management  
131 North 6th Street, Suite 300  
Grand Junction, CO 81501

Dear Mr. Elderkin:

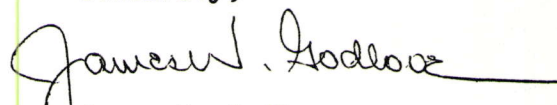
The White River Shale Oil Corporation (WRSOC) intends to conduct river bank stabilization activities along the White River. The bank stabilization project will consist of placing a maximum of 500 feet of riprap along the river frontage at a site located on the south bank of the White River in the northwest quarter of Section 14, Township 10 South, Range 24 East, and within Tract Ub. These activities are necessary to protect our two existing alluvial wells, as well as future alluvial well sites.

Enclosed is a copy of the 404 Permit Application submitted to the U.S. Army Corps of Engineers. This application describes the proposed bank stabilization project in detail.

WRSOC hereby requests approval from the BLM, Branch of Oil Shale to proceed with the proposed project as described in the 404 Permit Application. WRSOC would like to begin the bank stabilization project in the near future. Hence, your expeditious approval of the program is needed.

If you have questions regarding the proposed bank stabilization program, please feel free to call me or Ralph A. DeLeonardis for assistance.

Sincerely,

  
James W. Godlove  
Director of Environmental Affairs

JWG:RAD/mej

Enclosures

cc: Lloyd Ferguson  
Jim Smith

# WHITE RIVER SHALE OIL CORPORATION

SUITE 500 PRUDENTIAL BUILDING, 115 SOUTH MAIN STREET  
SALT LAKE CITY, UTAH 84111  
(801) 363-1170

October 20, 1983

Mr. Tom Skordal  
U.S. Army Corps of Engineers  
8402 Federal Building  
125 South State St.  
Salt Lake City, Utah 84138

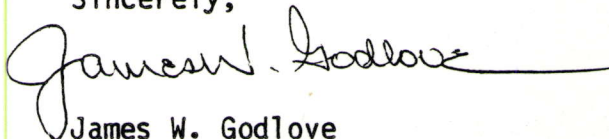
Dear Mr. Skordal:

The White River Shale Oil Corporation (WRSOC) intends to conduct river bank stabilization activities along the White River. The bank stabilization project will consist of placing a maximum of 500 feet of riprap along the river frontage. These activities are necessary to protect our two existing alluvial wells as well as future alluvial well sites required for the Phase I development of the White River Shale Project (WRSP).

Enclosed for your review and approval is an application for a Department of Army Permit (ENG form 4345) as required by Section 404 of the Clean Water Act. In order to protect our alluvial well field from further severe erosion, it is necessary to begin the bank stabilization program in the near future. Consequently, your expeditious approval of this application is sought.

If you have questions regarding the bank stabilization program, please call Mr. Ralph A. DeLeonardis for assistance.

Sincerely,



James W. Godlove  
Director of Environmental Affairs

JWG:RAD/mej

Enclosures

cc: Bob Elderkin  
✓ Jim Smith  
Lloyd Ferguson



## Question #6

The White River Shale Oil Corporation (WRSOC), as agent on behalf of Phillips Petroleum Company, Sohio Shale Oil Company and Sunoco Energy Development Co., intends to conduct river bank stabilization activities along the White River. These activities are necessary to protect our two existing alluvial wells which currently serve as WRSOC's only source of water, as well as future alluvial well sites required for the Phase I development of the White River Shale Project (WRSP). The bank stabilization site is located along the south bank of the White River in the northwest quarter of Section 14, Township 10 South, Range 24 East, and within Federal Oil Shale Lease Tract Ub. The enclosed location map (Attachment A) shows the general area of interest.

Also enclosed with this application is drawing #D-70-CE-6 (Attachment B) which depicts the proposed bank stabilization program. Drawing #D-70-CE-6 also indicates the bank stabilization work which was done in March 1983 under the authority of the Nationwide permit for bank stabilization. (On February 8, 1983, the Salt Lake City Regulatory Office of the U.S. Army Corp of Engineers issued a letter to WRSOC which stated that this work would be authorized by the Nationwide permit. A copy of that letter is enclosed as Attachment C.)

The work done under the Nationwide permit consisted of placing riprap along approximately 500 feet of river frontage. The "as constructed" project is represented by the shaded areas in drawing #D-70-CE-6. Since the time of project completion, large silt deposits associated with high river flows for most of the summer have built up along the shoreline in the vicinity of the riprap revetments. These deposits and the resultant new shoreline of the White River are indicated by the hatch marks on drawing #D-70-CE-6.

Because of these silt deposits, the present flow regime of the White River has reversed its previous pattern of erosion and is now eroding new areas of shoreline in the vicinity of the alluvial wells. Erosion in these areas was not anticipated when the original riprap revetments were installed, and in all likelihood, an erosion problem in these areas would not have occurred if the White River had not changed its flow pattern. As a result of this change, it is now necessary to place a maximum of 500 feet of additional riprap along the river frontage to protect the alluvial well site. The location where additional riprap must be place is indicated in drawing #D-70-CE-6.

WRSOC plans to initially install 250 feet of riprap along the shoreline. The riprap would begin at the point where the work done under the Nationwide permit ended and continue downstream. The installation of this riprap will protect the area where the existing alluvial wells are located. As discussed, this area has already experienced severe erosion.

WRSOC intends to develop additional wells in the adjacent alluvium to the west of the existing wells. It is anticipated that the installation of the 250 foot increment of riprap will also protect this area from erosion. However, if severe erosion does occur in this area, it will be necessary to install an additional 250 foot increment of riprap (i.e., total of 500 feet of "new" riprap). Drawing #D-70-CE-6 indicates where both of the 250 foot increments of riprap would be located.

The first 250 foot increment of riprap will be installed immediately after the 404 Permit has been issued. The second 250 foot increment would be installed sometime during the next 3 years, but only if erosion threatens the shoreline in the area of the future well site.



The riprap will have a minimum slack durability of 90% and a rock size no less than 6-inch. The riprap used for bank stabilization will be collected from areas within WRSOC's lease tracts where road development excavation has occurred. The majority of the riprap utilized will consist predominately of sandstone and similar materials indigenous to the area.

A river bank slope of 1.5:1 must be established to ensure successful placement and retention of the riprap. The existing bank will be laid back by removing material with a backhoe in order to achieve the desired slope. An approximate two foot thick riprap layer will then be placed upon the sloped surface. Typical Section A in drawing D-70-CE-6 indicates the proposed excavation scheme as well as the final bank configuration after the placement of the riprap. As indicated in the cross section, riprap will also be placed over the top of the existing bank to provide an additional margin of protection.

Based upon the bank stabilization design shown in drawing #D-70-CE-6, WRSOC estimates that a maximum of 1.5 cubic yards of riprap per foot of shoreline will be placed below the typical high water level of the White River. Typical high water level has been defined as the one year return flood level. The one year return flood has an average depth of 4 feet. For the purpose of estimating the amount of riprap to be placed below the typical high water level, an average depth of 5 feet was assumed to ensure a conservative estimate.

Assuming the need for 500 feet of riprap, a total of 750 cubic yards of riprap would be placed below the typical high water level. However, as indicated in drawing #D-70-CE-6, an approximate 50 foot portion of the bank has already undergone severe erosion. The revetment construction in this area will require the placement of riprap in quantities which exceed the average requirements for the remaining 450 feet of shoreline. The need for this additional material has been accounted for by increasing the maximum estimate for total materials placed within the waters of the U.S. to 825 yards. The 825 yard total was estimated by increasing the calculated quantity for the entire 500 feet of shoreline by 10%. Obviously, the final amount of material required will depend upon the actual shoreline configuration at the time of construction and can only be estimated at this point.

Substantially more riprap than the estimated 825 cubic yards, which will be placed within the waters of the U.S., will be used to complete the proposed bank stabilization project. Since the Corps of Engineers has not designed the area to be a wetlands, it is our understanding that a permit from the Corps will not be required for any riprap placed above the waters of the U.S. Enclosed is a copy of the letter received from the Sacramento District which confirms that area's designation (Attachment D).

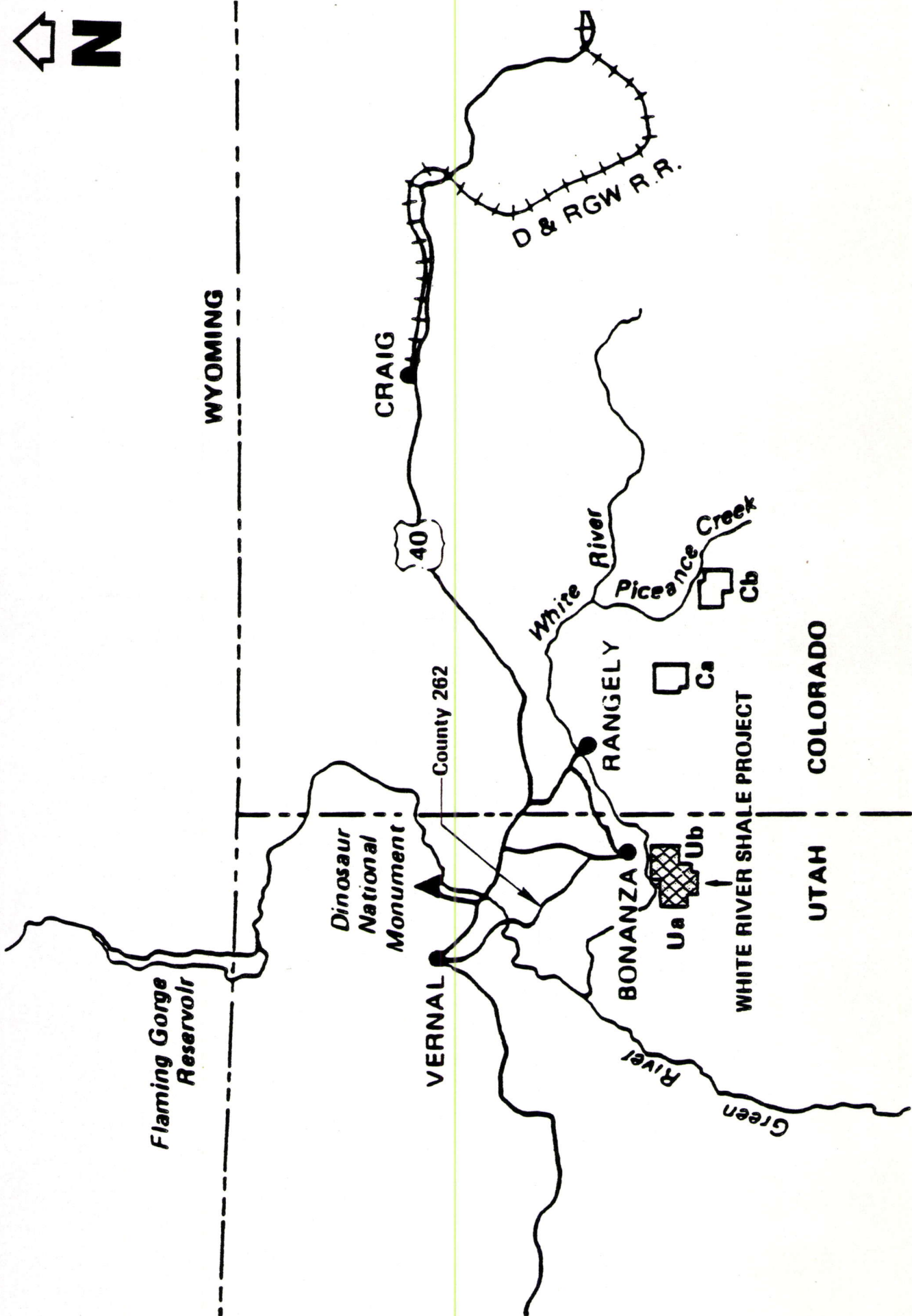
During construction of the riprap revetments, site access will occur via the existing alluvial well access road. Earthen ramps will be constructed from the existing pads (approximately five feet high) to the alluvial plain and river bank. An area approximately 100 feet wide along the bank will be required for work activities. After the bank has been shaped to a 1.5:1 slope, riprap will be placed on the slope using backhoe, dozing and dumping techniques. Construction equipment will work from the existing river bank and no equipment will be driven into the river. Excess material excavated from the river bank to create the 1.5 to 1 slope will be contoured along the alluvium in the vicinity of the riprap revetments.



As discussed, WRSOC intends to begin construction of the first increment of riprap as soon as possible. It is anticipated that 2 to 3 weeks will be required to complete this increment. All work on the first increment will be completed well in advance of the spawning season for the endangered Colorado squawfish. If the installation of the second increment of riprap is required, the work will be implemented at a time which does not coincide with the spawning of the Colorado squawfish. Further, it should be noted that spawning of Colorado squawfish has never been demonstrated to occur in the White River. Consequently, no adverse impacts on the endangered species are likely to occur from the proposed project.

In addition, the U.S. Fish and Wildlife Service issued an endangered species clearance for the White River Shale Project on September 15, 1981. The clearance covered all T and E aquatic species for Phase I development of the WRSP.

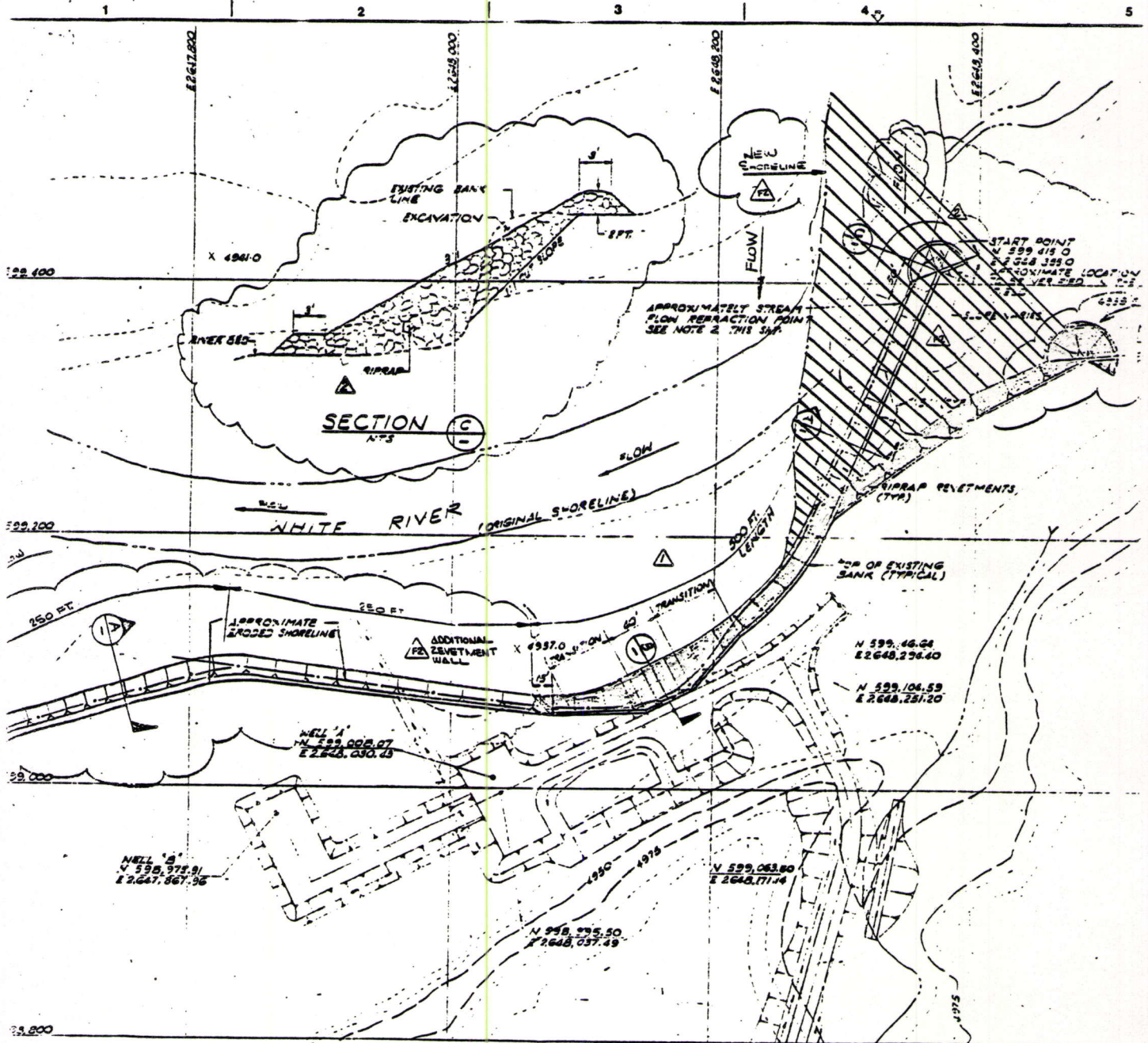
After all riprap is in place, construction disturbed areas will be contoured approximately to original conditions. In conformance with the procedure established for the alluvial well field area, disturbed areas will be left fallow rather than revegetated immediately. These areas will be monitored to ascertain revegetation success, and alternative methods will be used, if necessary.







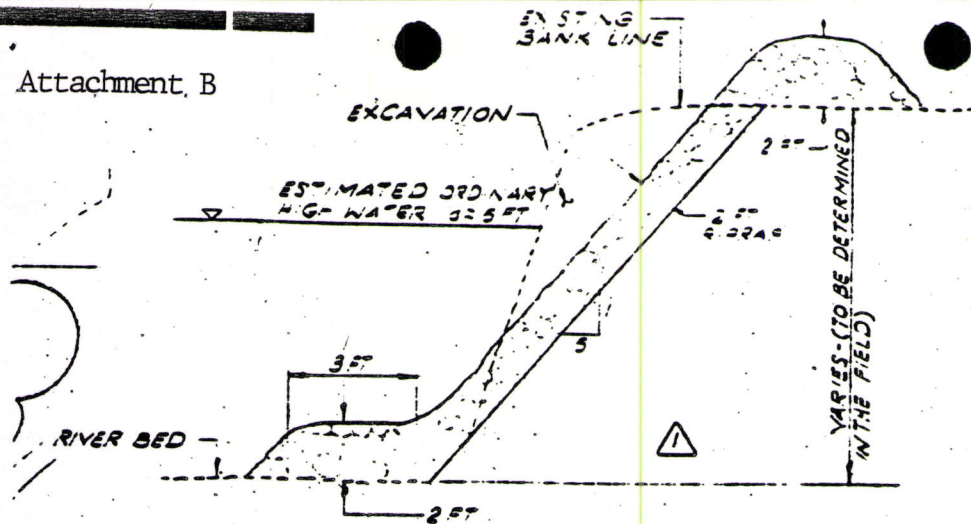
# Attachment B



NO.	DATE	BY	DESCRIPTION	APPROVED	DATE	BY	DESCRIPTION	APPROVED
1	10/1/73	AS	DESIGN	AS	10/1/73	AS	DESIGN	AS
2	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
3	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
4	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
5	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
6	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
7	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
8	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
9	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS
10	10/1/73	AS	REVISION	AS	10/1/73	AS	REVISION	AS

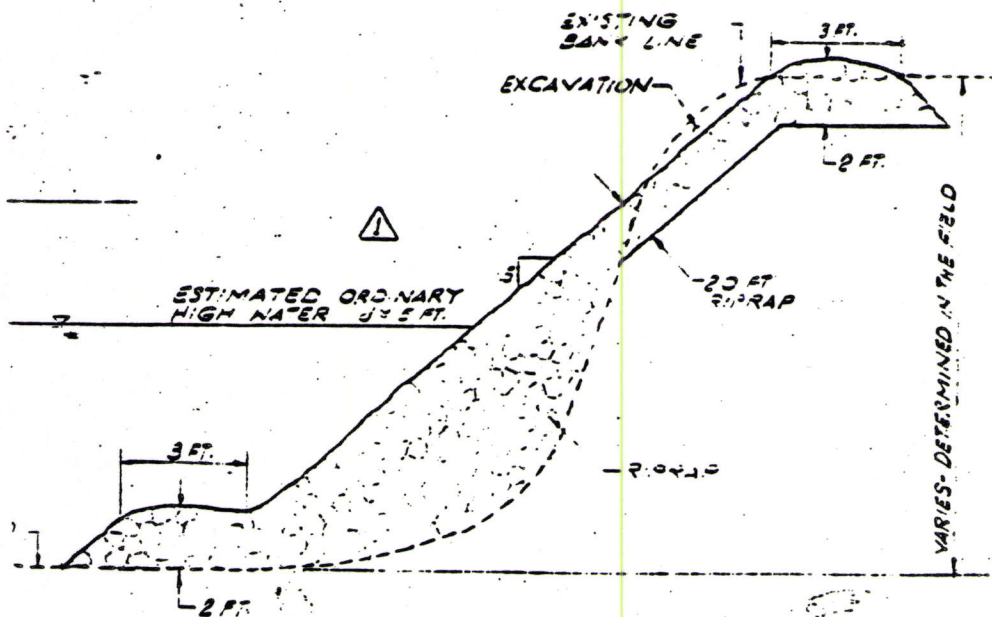
WHITE RIVER SHALE PROJECT  
 Tracts Ua-Ub  
 River Bank Protection  
 at the Well Site  
 Drawing #D-70-CE-6





**TYPICAL SECTION**  
**SECTION (A)**  
NTS

**NOTE:**  
THE STREAM FLOW REFRACTION ON 20 FT SPALL BE  
LOCATED BY CONSTRUCTOR'S FIELD ENGINEER.



**SECTION (B)**  
NTS

**WR  
SP**

**WHITE RIVER SHALE PROJECT  
TRACTS Ua-Ub**

IS COMPANY  
ORNIA

**RIVER BANK PROTECTION  
AT THE WELL SITE**

TITLE	SCALE	ACCOUNT NUMBER	JOB NUMBER	VISION
RIVER BANK PROTECTION AT THE WELL SITE	4800	6205-17L		
DOCUMENT NUMBER	D-70-CE-6			

F-2



Attachment C



DEPARTMENT OF THE ARMY  
SACRAMENTO DISTRICT, CORPS OF ENGINEERS  
650 CAPITOL MALL  
SACRAMENTO, CALIFORNIA 95814

REPLY TO  
ATTENTION OF

February 8, 1983

Regulatory Unit 3 (N1382015)

Mr. James W. Godlove *[Signature]*  
White River Shale Oil Corporation  
Suite 500 Prudential Building  
115 South Main Street  
Salt Lake City, Utah 84111

Dear Mr. Godlove:

This is in response to your letter dated January 28, 1982 concerning the proposed placement of rock riprap for bank protection along the White River in the northwest quarter of Section 14, Township 10 South, Range 24 East, Uintah County, Utah.

We have reviewed the information you submitted and concur that the work would be authorized by the Nationwide permit for bank protection. We have enclosed, for your reference, an information sheet which lists the conditions and management practices which must be met for work to be authorized under this Nationwide permit.

If you have any questions, please contact me in our Salt Lake City Regulatory office, telephone (801) 524-6015.

Sincerely,

A handwritten signature in dark ink, appearing to read "Tom Skordal", is written above the typed name.

THOMAS M. SKORDAL  
Chief, Salt Lake City Regulatory  
Office

Enclosure

Copies Furnished:

Utah Bureau of Water Pollution Control  
U.S. Fish and Wildlife Service  
U.S. Environmental Protection Agency



APPLICATION FOR A DEPARTMENT OF THE ARMY PERMIT  
For use of this form, see EP 1145-2-1

Form Approved - Office of  
Mgmt & Budget No. 49-R0420

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of P. L. 92-500 and Section 103 of P. L. 92-532. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in ENG Form 4345 will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and checklist) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. Application number (To be assigned by Corps)		2. Date <u>21</u> <u>10</u> <u>83</u> Day Mo. Yr.		3. For Corps use only.							
4. Name and address of applicant. WHITE RIVER SHALE OIL CORPORATION* 115 South Main, Suite 500 Salt Lake City, Utah 84111 Telephone no. during business hours A/C ( 801 ) <u>363-1170</u> A/C ( ) _____		5. Name, address and title of authorized agent. Jim Godlove, Director of Environmental Affairs 115 South Main, Suite 500 Salt Lake City, Utah 84111 Telephone no. during business hours A/C ( 801 ) <u>363-1170</u> A/C ( ) _____									
6. Describe in detail the proposed activity, its purpose and intended use (private, public, commercial or other) including description of the type of structures, if any to be erected on fills, or pile or float-supported platforms, the type, composition and quantity of materials to be discharged or dumped and means of conveyance, and the source of discharge or fill material. If additional space is needed, use Block 14.  See Attachment											
7. Names, addresses and telephone numbers of adjoining property owners, lessees, etc., whose property also adjoins the waterway. The bank stabilization site is located within Federal Oil Shale Lease Tract Ub. The Bureau of Land Management, Branch of Oil Shale, administers the leases for Tracts Ua and Ub (Phone: 303-245-6700; address: 131 N. 6th St., Grand Junction, CO 81501). WRSOC has a Federal Oil Shale Lease for the oil shale mineral rights on Tracts Ua and Ub.  Surface rights to the bank stabilization site are owned by Mr. LaRue Pickup and Family (Phone: 801-545-2445; Address: Randlett, UT 84063). WRSOC has a fully executed Easement Agreement with the Pickup Family which allows for the development and maintenance of our alluvial wells on this site.											
8. Location where proposed activity exists or will occur. Address: <u>Federal Lease Tract Ub,</u> <u>NW Quarter of Section 14, T10S, R24E</u> Street, road or other descriptive location <u>approximately 5 miles south of Bonanza</u> In or near city or town  <u>Uintah</u> <u>Utah</u> <u>84078</u> County State Zip Code			Tax Assessors Description: (If known) <table border="1"><tr><td>Map No.</td><td>Subdiv. No.</td><td>Lot No.</td></tr><tr><td>Sec.</td><td>Twp.</td><td>Rge.</td></tr></table>			Map No.	Subdiv. No.	Lot No.	Sec.	Twp.	Rge.
Map No.	Subdiv. No.	Lot No.									
Sec.	Twp.	Rge.									
9. Name of waterway at location of the activity. White River											



10. Date activity is proposed to commence. 2 weeks after issuance of permit

Date activity is expected to be completed not more than 3 years after issuance of permit. See answer to question #6 for details.

11. Is any portion of the activity for which authorization is sought now complete? ☐ YES ☒ NO  
If answer is "Yes" give reasons in the remark section. Month and year the activity was completed \_\_\_\_\_ . Indicate the existing work on the drawings.

12. List all approvals or certifications required by other federal, interstate, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application.

<u>Issuing Agency</u>	<u>Type Approval</u>	<u>Identification No.</u>	<u>Date of Application</u>	<u>Date of Approval</u>
BLM	Approval to construct		10/21/83	not yet received; anticipated by 12/1/83

13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?

☐ Yes ☒ No (If "Yes" explain in remarks)

14. Remarks or additional information.

15. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

  
Signature of Applicant or Authorized Agent

The application must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 5) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.

18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.





Attachment D

DEPARTMENT OF THE ARMY  
SACRAMENTO DISTRICT, CORPS OF ENGINEERS  
650 CAPITOL MALL  
SACRAMENTO, CALIFORNIA 95814

REPLY TO  
ATTENTION OF SPKCO-0

3 August 1982

Mr. Ralph A. DeLeonardis  
White River Shale Oil Corporation  
Suite 500 Prudential Building  
115 South Main Street  
Salt Lake City, Utah 84111

Dear Mr. DeLeonardis:

We are writing to respond to your letter dated 19 July 1982, and give you the results of a subsequent inspection by Mr. Norm Sanders from our Grand Junction Regulatory Office of your operation adjacent to the White River near Bonanza, Uintah County, Utah.

The area of your test wells and sediment pond does have vegetation typical of a wetland area. However, based on the hydraulic characteristics and soil conditions, Mr. Sanders determined that his area is not a wetland. A Department of Army permit is not required, therefore, for the fill in this area.

Any further work, anticipated within the flood plain of the White River in your work area, should be coordinated with our office because there are wetlands in the vicinity of your work site. You may contact our Grand Junction Regulatory Office, telephone (303) 243-1199.

Sincerely,

D. A. DENNIS  
Chief, Construction-Operations  
Division

cc P. Rutledge 8-4-82

600 R. Alodan  
C. Donay  
L. Pange  
J. Goff  
B. Fagan  
M. Fagan